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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,102	04/13/2004	Yonghe Liu	TI-37140	4525
23494 7590 08/06/2008 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				
EXAMINER KANGARLOO, RAMTIN				
ART UNIT 2619		PAPER NUMBER		
NOTIFICATION DATE 08/06/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/823,102

Applicant(s)

LIU ET AL.

Examiner

RAMTIN KANGARLOO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/18/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 7-9, 14, 15 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
2. In claims 1-9 "an arrangement for avoiding contention" is being used; However arrangement for avoiding contention is not a physical element and does not fall within a statutory category since it is clearly not a series of step or acts to constitute a process, machine, manufacture, or composition of matter. The claims do not meet the requirement under U.S.C. 101.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 10, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al. (US patent No. 5774459) in view of the Sashihara et al. (US Patent Application Publication No. 2003/0189948).

Regarding **claim1 and 10**, Bruno discloses an arrangement for avoiding contention on a communication medium among devices including at least a transmitter (Fig.1, 101) and a receiver (fig.1, 100), the arrangement comprising: a first portion configured to indicate that the communication medium is busy (See col.3, lines 64-67, transmitter indicate that the medium is busy) for a time period substantially longer than an actual frame transmission period being sent from the transmitter to the receiver (See col.4, lines 2-5 medium is busy for a time period longer than transmission period); and a second portion configured to prohibit the receiver from transmitting on the communication medium during the time period (See col.2, lines 36- 42). Bruno does not explicitly disclose a first portion configured to instruct the receiver. Sashihara teaches a first portion configured to instruct the receiver (See page 5, paragraph [0120] and page 4, paragraph [0099]).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount transmitter instruction taught by Sashihara into the contention control system as show in Bruno to manage traffic in order to improve priority data transfer.

Regarding **claim2**, Bruno and Sashihara disclose all of the limitation as applied to claim 1. Further Bruno discloses the first portion is embodied in the

transmitter (Fig. 1, 101); and the second portion is embodied in the receiver (fig.1, 100).

Regarding **claim16**, Bruno discloses a network including a communication medium on which contention is to be avoided the network comprising:
a transmitting element (Fig.1, 101), configured to transmit on the communication medium, that the communication medium is busy for a time period substantially longer than an actual transmission time of the frame that includes the instruction(See col.4, lines 2-5 medium is busy for a time period longer than transmission period);
and a receiving element (fig.1, 100), configured to receive the frame that includes the instruction, and, in response to the instruction, to refrain from transmitting on the communication medium during the time period, so as to avoid the contention on the communication medium(See col.2, lines 36- 42).
Bruno does not explicitly disclose a frame that includes an instruction.
Sashihara teaches a frame that includes an instruction (See page 5, paragraph [0120] and page 4, paragraph [0099]).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount transmitter instruction taught by Sahihara into the contention control system as show in Bruno to manage traffic in order to improve priority data transfer.

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Regarding **Claim 18**, Bruno and Sashihara disclose all of the limitations as applied to claim 16. Further Sashihara teaches the communication medium is a wireless communication medium.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount wireless communication medium taught by Sashihara into the contention control system as show Bruno in order to transmit data so that system become more reliable.

5. Claims 3 -5, 11, 12, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al. (US Patent No 5774459) In view of Sashihara et al. (US Patent Application Publication. No 2003/0189948) as applied to claim 1, 10 and 16 above, and further in view of Terry et al. (US Patent No.7046651).

Regarding **Claim 3**, Bruno and Sashihara disclose all of the limitations as applied to claim 1. Bruno and Sashihara do not specifically disclose transmitter has a much higher throughput capability than the receiver. However Terry teaches the transmitter has a much higher throughput capability than the receiver (See col. 9, Lines 33-37).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount high throughput taught by Terry into the contention control system as show in the system of Bruno and Sashihara to forward information in order to improve transmission rate.

Regarding **Claims 4 and 11**, Bruno and Sashihara disclose all of the limitations as applied to claims 1 and 10. Bruno and Sashihara do not specifically disclose the first portion constitutes a field within a physical layer (PHY) protocol data unit (PDU), the field specifying duration of the time period. However Terry teaches the first portion constitutes a field within a physical layer (PHY) protocol data unit (PDU), the field specifying duration of the time period (See col. 13, Lines 57-60 and fig.11 66a and 66b).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount data unit taught by Terry into the contention control system as show in the system of Bruno and Sashihara to forward information in order to correctly route the data frame to the end system.

Regarding **Claims 5 and 12**, Bruno and Sashihara disclose all of the limitations as applied to claims 1 and 10. Bruno and Sashihara do not specifically disclose the first portion includes a designation in a SIGNAL1 field of a physical layer convergence protocol (PLCP) frame constituting the same frame that is being sent from the transmitter to the receiver. However Terry teaches the first portion includes a designation in a SIGNAL1 field (fig.11, OFDM signal field) of a physical layer convergence protocol (PLCP) frame constituting the same frame that is being sent from the transmitter to the receiver (See col. 13, Lines 51-60).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount signaling for frame transmission taught by Terry into the contention control system as show in the system of Bruno and Sashihara to forward information in order to improve priority data transfer.

Regarding **Claim 17**, Bruno and Sashihara disclose all of the limitations as applied to claim 16. Bruno and Sashihara do not specifically disclose the transmitting element has a much higher throughput capability than the receiving element. However Terry discloses the transmitting element has a much higher throughput capability than the receiving element (See col. 3, Lines 15-18).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount high throughput taught by Terry into the contention control system as show in the system of Bruno and Sashihara to forward information in order to improve transmission rate.

Regarding **Claim 19**, Bruno and Sashihara disclose all of the limitations as appliedto claim 16. Bruno and Sashihara do not specifically disclose the instruction is a designation in a SIGNAL1 field of a physical layer convergence protocol (PLCP) frame constituting the same frame that is transmitted from the transmitting element to the receiving element, the SIGNAL1 field defining parameters associated with a particular communications protocol that is one of plural distinct communications protocols operating on the network. However the instruction is a designation in a SIGNAL1 field (fig.11, OFDM signal field) of a

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physical layer convergence protocol (PLCP) frame constituting the same frame that is transmitted from the transmitting element to the receiving element, the SIGNAL1 field defining parameters associated with a particular communications protocol that is one of plural distinct communications protocols operating on the network (See col. 13, Lines 51-60).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount high throughput taught by Terry into the contention control system as show in the system of Bruno and Sashihara to forward information in order to improve transmission rate.

6. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al. (US Patent No 5774459) In view of Sashihara et al. (US Patent Application Publication. No 2003/0189948) in view of Terry et al. (US Patent No.7046651) as applied to claim 1, 10, 5 and 12 above, and further in view of Luna-Aceves et al. (US Patent No 6996074).

Regarding **Claim 6 and 13** Bruno, Sashihara and Terry disclose all of the limitations as applied to claim 5 and 12. Bruno, Sashihara and Terry do not specifically disclose legacy receivers, having a slower throughput capability than a throughput capability of the transmitter, recognize the SIGNAL1 field but do not recognize a SIGNAL2 field. However Luna-Aceves teaches legacy receivers, having a slower throughput capability than a throughput capability of

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the transmitter, recognize the SIGNAL1 field but do not recognize a SIGNAL2 field (See col.5, lines 25-28).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount slower throughput taught by Luna-Aceves into the contention control system as show in the system of Bruno, Sashihara and Terry to forward information in order to control transmission rate.

Allowable Subject Matter

7. Claim 7-9, 14, 15 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMTIN KANGARLOO whose telephone number is (571)270-3452. The examiner can normally be reached on Mon to Fri 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571) 272- 3144. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RAMTIN KANGARLOO/
Examiner, Art Unit 2619
July 30, 2008

/Chirag G Shah/
Supervisory Patent Examiner, Art Unit 2619